ONONDAGA LAKE PARTNERSHIP

A clean lake reflects well on all of us.

Onondaga Lake
Partnering For Success

Presentation
To
Ms. Christie Whitman
USEPA

July 8, 2002

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Management Plan Structure

- Ammonia/Phosphorus Reduction
- Bacteria/Floatables Reduction
- Contamination Removal/Contain
- Groundwater, Mudboils, Modelin
- Strategic Plans & Implementatio
- Redevelopment & Recreation
- Urban and Rural Best Mgt Practi
- Leadership, Outreach, Coordinat

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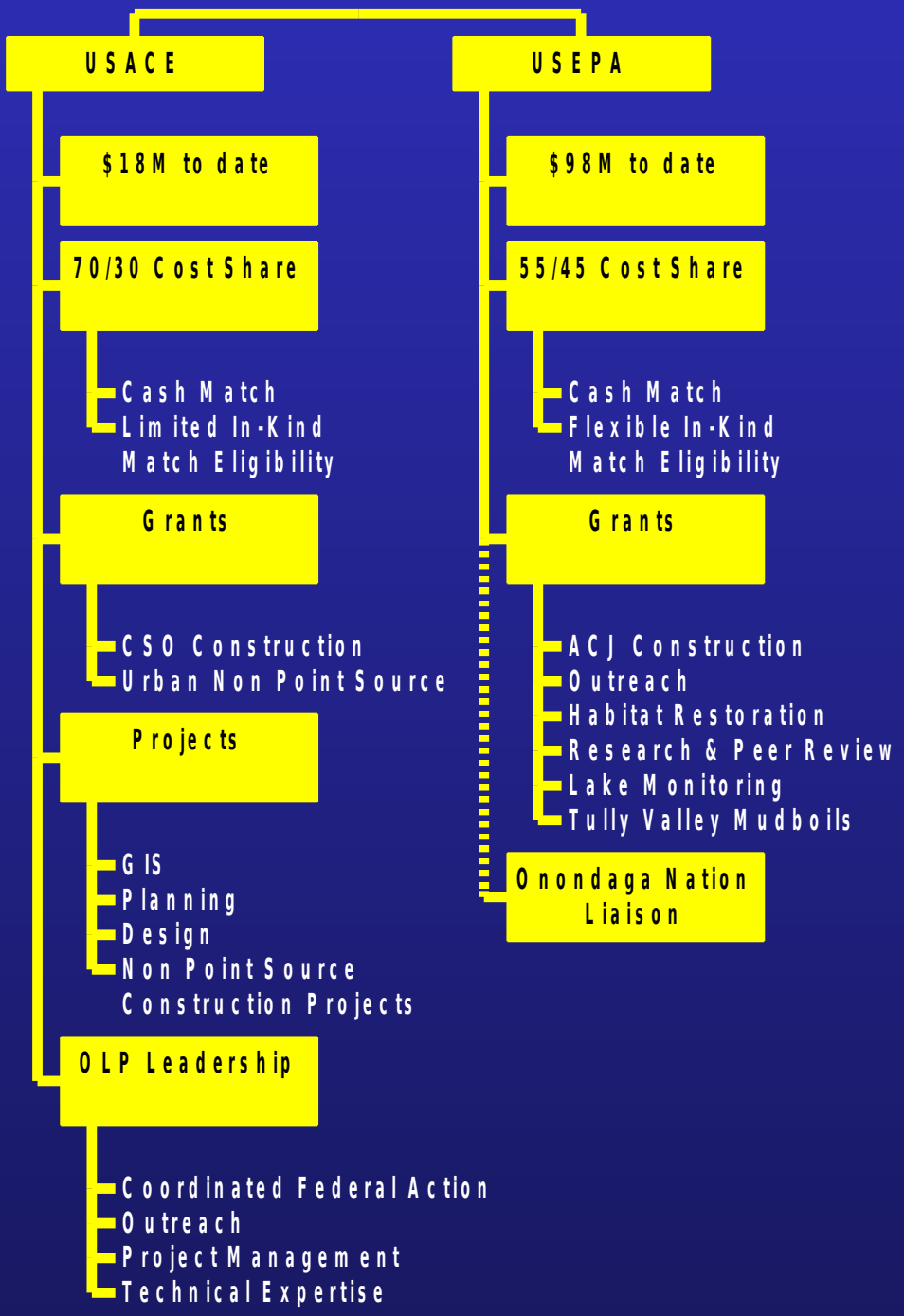
Federal Partnering



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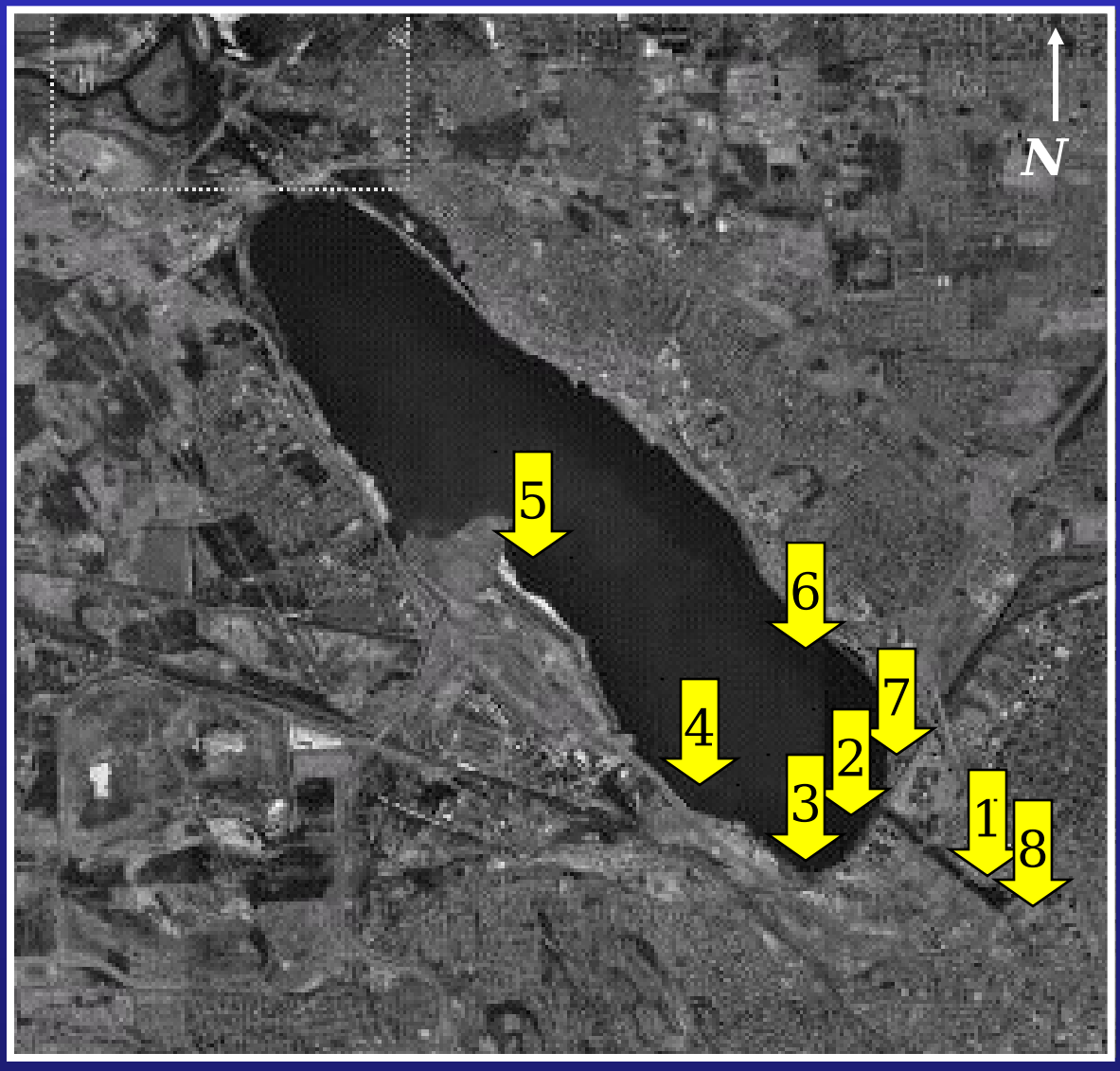
Boat Tour Route & Topics



1 - Depart Inner Harbor
2 - Combined Sewer Overflows
3 - Wastewater Treatment
4 - Industrial Pollutants
5 - NPL Site & Wastebed
6 - Habitat & Lake Trail
7 - Non Point Source
8 - Arrival Inner Harbor

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Combined Sewer Overflows

Description:

- 62 CSOs discharging 1 billion gallons of combined storm and sanitary sewage per year through lake tributaries
- 16 projects to separate sewers and treat overflow discharge

Current Activities:

- 19 construction contracts awarded and 12 major projects completed to date
- 3 additional projects to be completed in 2002
- Urban Best Management Practices program underway

Future Activities:

- 2002 completion of pumping facilities, floatables control facilities, and sewer separation projects
- Initiate construction on Phase II Midland Avenue RTF and Conveyances project
- Complete plans, environmental assessments, and construction for Harbor Brook and Clinton Street CSO abatement projects

Purpose & Cost:

- Significantly reduce CSO derived floating substances and concentrations of bacteria in Onondaga Lake and 3 tributaries.
- Total estimated cost will exceed $220 million

Vision of Success:

- People will be able to safely swim and participate in other water contact recreational activites
- Onondaga Lake will be an enhanced recreational, ecological and economic resource

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Wastewater Treatment Improvements

Description:

- Treatment plant built in 1925. Serves 270,000 people (80 mgd)
- Principal tributary to Onondaga Lake
- Principal pollutants of concern ammonia and phosphorus

Current Activities:

- 29 construction contracts awarded to date
- 8 construction and pilot projects completed to date
- Plant improvements have improved lake water quality, decreased plant odors and reduced energy requirements

Future:

- Complete single largest and most important project - Stage III Ammonia and Stage II Phosphorus Removal project (2004)
- Evaluate need for additional phosphorus removal

Purpose & Cost:

- More efficient and effective treatment of wastewater
- Enhanced year round ammonia removal
- Significant phosphorus reduction
- Installation of UV disinfection for the secondary/tertiary system
- Total estimated cost of improvements will exceed $160 million

Vision of Success:

- Largest application of these ammonia & phosphorus technologies in North America.
- Improved quality of the Metro effluent will improve lake clarity, reduced algae, enhance habitat and increased dissolved oxygen

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NPL Site & Industrial Pollutants

Description:

- NPL Site = Lake Bottom with eight contributing subsites
- Contaminants of concern = mercury, lead, alkali wastes, benzene, chlorinated benzenes, toluene, PCBs, dioxins, furans

Current Activities:

- Lake Bottom: State is rewriting Remedial Investigation & Risk Assessment. Six interim remedial measures in progress by Honeywell
- Subsites: Multiple RI/FS/ROD/RA in progress

Future Activities:

- Lake Bottom: ROD to be issued Spring 2005
- Subsites: Remedial actions likely through 2010 with continued long-term monitoring/assessment

Purpose & Cost:

- Ensure site investigations and remedial actions comply with CERCLA (Comprehensive Response, Compensation and Liability Act). Remediation costs yet to be determined.

Vision of Success:

- Ensure sites are protective of human health and the environment
- Remedy natural resources damages

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Habitat & Lake Trail

Description: Rehabilitate aquatic, shoreline, and upland habitat and provide public access and recreational opportunities

Current Activities:

- **Comprehensive Plan:** OLP preparing habitat restoration plan to prioritize future projects. Expected completion in 2003.
- **Design:** $1.5 million design of combined lake trail and habitat modules project. Expected completion 2004.
- **Ecological Monitoring:** Measuring biologic response to construction of aquatic habitat built in 2001.

Future Activities:

- **Design:** Potential restoration of additional aquatic habitat (approximately 20 acres), wetlands connections and tributaries
- **Construction:** Anticipate building third segment of lake trail and aquatic habitat in 2005

Purpose & Cost:

- **Purpose:** Rehabilitate degraded habitat and provide public access through bike/hike trail from downtown around entire lake.

• Vision of Success:

- Restoration of degraded habitat and fisheries
- Public access and educational / recreational opportunities

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Non-Point Source Pollution

Description:

- **Urban Pollutants:** Stormwater discharge (sediment, litter, road grit)
- **Rural Pollutants:** Sediment and agricultural runoff (fertilizer, pesticides, animal and dairy wastes)

Current Activities:

- **Urban:** Public education & outreach, street sweeping & litter control, storm drain investigations
- **Rural:** Streambank stabilization and whole-farm environmental management practices (runoff control, waste reduction and management)

Future Activities:

- **Urban:** Storm sewer catch-basin upgrades
- **Rural:** Expanded streambank & roadbank stabilization and agricultural programs

Purpose & Cost:

- **Purpose:** Reduce turbidity & pathogens, improve water quality and habitat. Approximately $x million

Vision of Success:

- Measurable improvement in water clarity and chemistry resulting in enhanced habitat and fisheries and public recreational opportunities

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nner Harbor & Redevelopmen

Description

- Redevelop 42 acres of vacant land surrounding Syracuse Inner Harbor

Current Activities

- **West Shore:** Residential housing, interspersed with neighborhood commercial (7 acres). Traditional neighborhood projects (10 acres).
- **Southeast Shore: C**ommercial retail, restaurants and entertainment (8 acres) with office space and/or housing
- **Northeast Shore :** Preparing to reuse 30,000 square foot NYS Canal Corporation maintenance facility

Future Activities

- Refurbish freight house and north pier bulkhead
- Complete the Creekwalk and Lake Trail
- Build a fully equipped marina

Purpose & Cost

- Complete the $15 million NYS Canal Corp and City of Syracuse $2.5 million investment in public amenities with a world class waterfront mixed-use community
- $625 million invested to date in Syracuse Lakefront

Vision of Success

- A thriving, organized, exciting Syracuse Lakefront that is a complete live/work/play destination

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Tab-1
Wastewater Treatment Improvemen

ONONDAGA COUNTY ACJ
Metro PROJECTS STATUS SUMMARY
7/1/02

PROJECTS	FUNDING	STATUS
Metro		
Aeration System Upgrade	State/County	Complete
Ammon. Removal Demonstration	State/County	Complete
Digester Modifications	State/County	Complete
Chemical Storage	State/County	Complete
Digital Systems Upgrade	State/County	Complete
Miscellaneous Improvements	County	Complete
Odor Control/Residuals Handling	County	Complete
Ammonia/Phosphorus Removal	Federal/State/ County	ALL Contracts Awarded, Completion Spring 2004
Phosphorus Removal – Pilot	State/County	Phase I(1) Complete Phase 2(2) Field Work and Report Complete

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Tab-2
Combined Sewer Overflows

ONONDAGA COUNTY ACJ
CSO PROJECTS STATUS SUMMARY
7/1/02

PROJECTS	FUNDING	STATUS
CSO		
Franklin Street FCF	State/County	Complete
Maltbie Street FCF	State/County	Complete
Newell Street RTF Pilot	State/County/ NYSERDA	Complete
Siphon Rehabilitation	State/County	Complete
West Street Sewer Separation	State/County	Complete
Hiawatha Interceptor/RTF[3]	Federal/County	Complete
Kirkpatrick Street Pump Station	State/County	Under Construction, Completion Nov. 1, 2002
Midland Avenue Phase I	Federal/State/ County	Complete
Midland Avenue Phase II	Federal/State/ County	Anticipated Start of Construction Spring 2003
Midland Avenue Phase III	Federal/state/ County	Anticipated Start of Construction ?
Harbor Brook FCF	State/County	Under Construction
Teall Brook FCF	State/County	Complete
Onondaga Creek FCF	State/County	Skimmer Boat in Operation
Sewer Separation[4]	Federal/State/ County	024 Complete 053/054 to be Bid Opening July
Erie Blvd Storage System Upgrade	State/County	Complete
Clinton CSO Facilities Plan & Conceptual Design	Federal/State/ County	Draft Facilities Plan Complete
Harbor Brook CSO Facilities Plan & Conceptual Design	State/County	Draft Facilities Plan Complete

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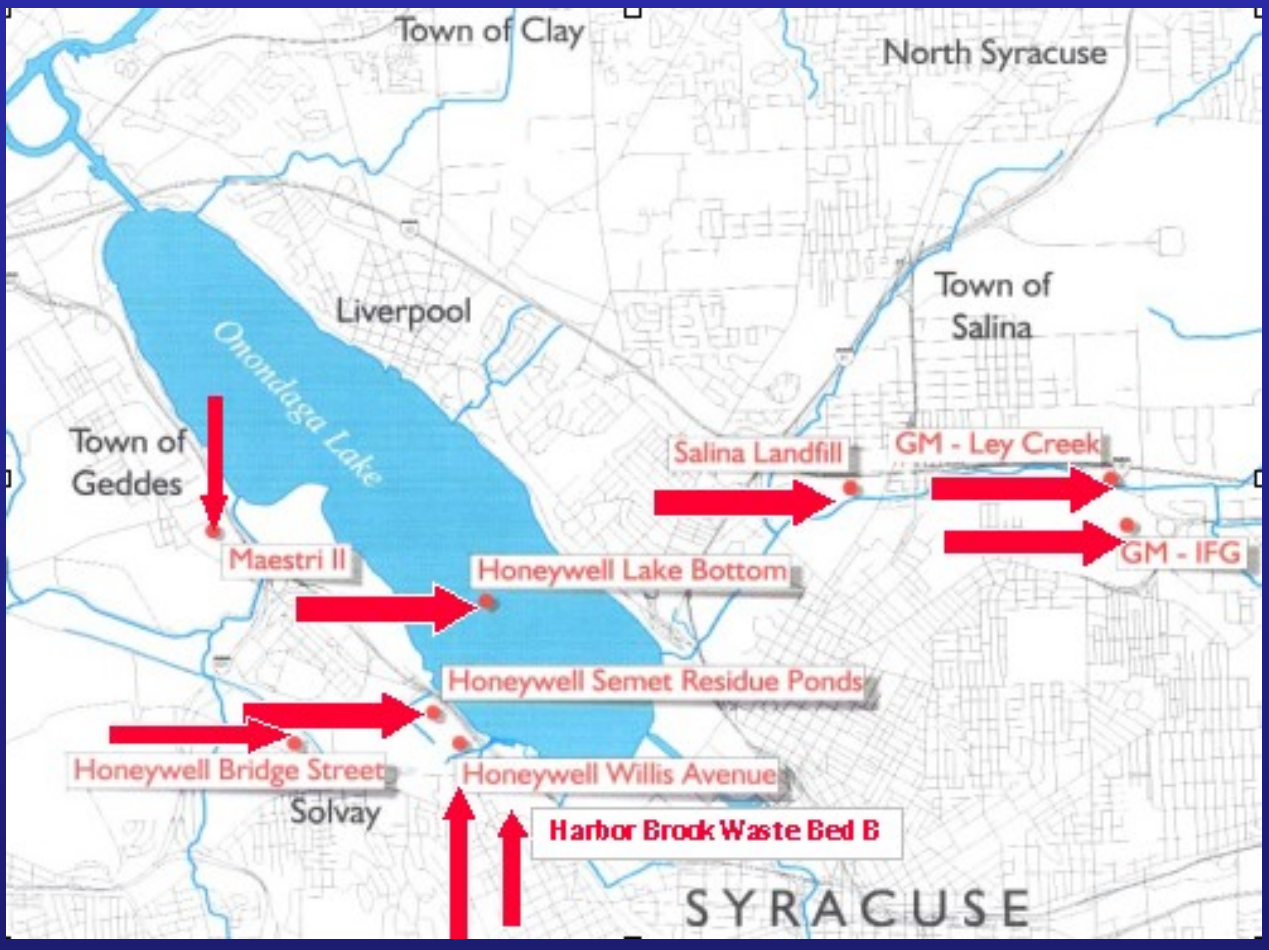
Tab-3
NPL Site & Industrial Pollutants



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Lake Bottom NPL Site & Subsites

Contaminants of Concern

Onondaga Lake Bottom: mercury, alkali wastes, benzene, chlorinated benzenes, toluene, chromium, naphthalene, lead, PCBs, dioxins and furans

Maestri II Site: barium, mercury, chromium, toluene, chlorinated benzenes, xylene, phenols, phthalates,polycyclic aromatic hydrocarbons

Ley Creek Dredging Site: PCBs

Semet Residue Ponds: Benzene, toluene, xylene, phenols, cresols, carbon disulfide and naphthalene

Town of Salina Landfill: Volatile organic compounds (VOCs), PCBs.

General Motors Fisher Guide Site: Trichloroethylene, xylene, phenols, naphthalene, polynuclear aromatic hydrocarbons, chlorinated dioxins and furans

LCP Bridge Street Site: PCBs, mercury, xylene

Willis Avenue Site: Chlorinated benzenes, mercury, benzene, ethyl benzene, toluene, xylene, phenols, naphthalene, polynuclear aromatic hydrocarbons, chlorinated dioxins, furans

Harbor Brook Waste Bed B: Naphthalene, chlorinated benzenes, Benzene Toluene Ethyl Benzene Xylene (BTEX), trimethylbenzene isomers,

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Lake Bottom NPL Site & Subsites

Status of Sites

Onondaga Lake Bottom: ROD to be issued Spring of 2005 Rewriting of RI and Risk Assessment by the state is underway.

Maestri II Site: R1/FS to be completed Summer, 2003

Ley Creek Dredging Site: Construction completed: November of 2001

Semet Residue Ponds: ROD issued : March 2002

Town of Salina Landfill: FS completed. ROD anticipated fall 2002

General Motors Fisher Guide Site: Landfill capping IRM to begin construction Fall 2002, Storm water retention pond and treatment and IRM to begin construction Summer 2002. Swale Removal IRM to begin construction Summer 2002.

LCP Bridge Site: ROD issued: September 2000. RD/RA order signed March 2002. Design completed for spring 2004

Willis Avenue Site: RI/FS to be completed Summer 2003.

Harbor Brook Waste Bed B: RI started 11/01, ROD anticipated Fall 2004

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Honeywell IRMs

- **Semet/Willis Groundwater DNAPL Barrier & Collection System** : Purpose: To Eliminate the migration of DNAPLs and contaminated groundwater into Onondaga Lake. Work plan development underway. Field Investigation to begin Fall 2002

- **I-690 Pilot Study**: Purpose: To Determine the means by which site-related contaminants enter the 1-690 storm drain system. This system discharges into Onondaga Lake. Results to be incorporated in Semet/Willis IRM design. work plan development underway. Field Investigation to begin Fall 2002.

- **DNAPL Enhancement** – Purpose: to improve the recovery of chlorinated benzene DNAPLs in the Lakeshore area. Field work to start summer 2002, completed by fall 2003

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Honeywell IRMs continued

- **Semet Seeps**: Purpose: to evaluate /monitor the tar seep areas and to improve soils characterization in various site areas. Field work completed

- **Geddes Brook**: Purpose: to remove all sediments in Geddes brook between its confluence with the West Flume and continuing to its confluence with Nine Mile Creek, and to remediate contaminated floodplain soils in this area. Work plan development underway. Field work Investigation to begin Fall 2002

- **East Flume** : Purpose: To remove all sediments from the East Flume. Work plan development underway Field work Investigation to begin Fall 2002.

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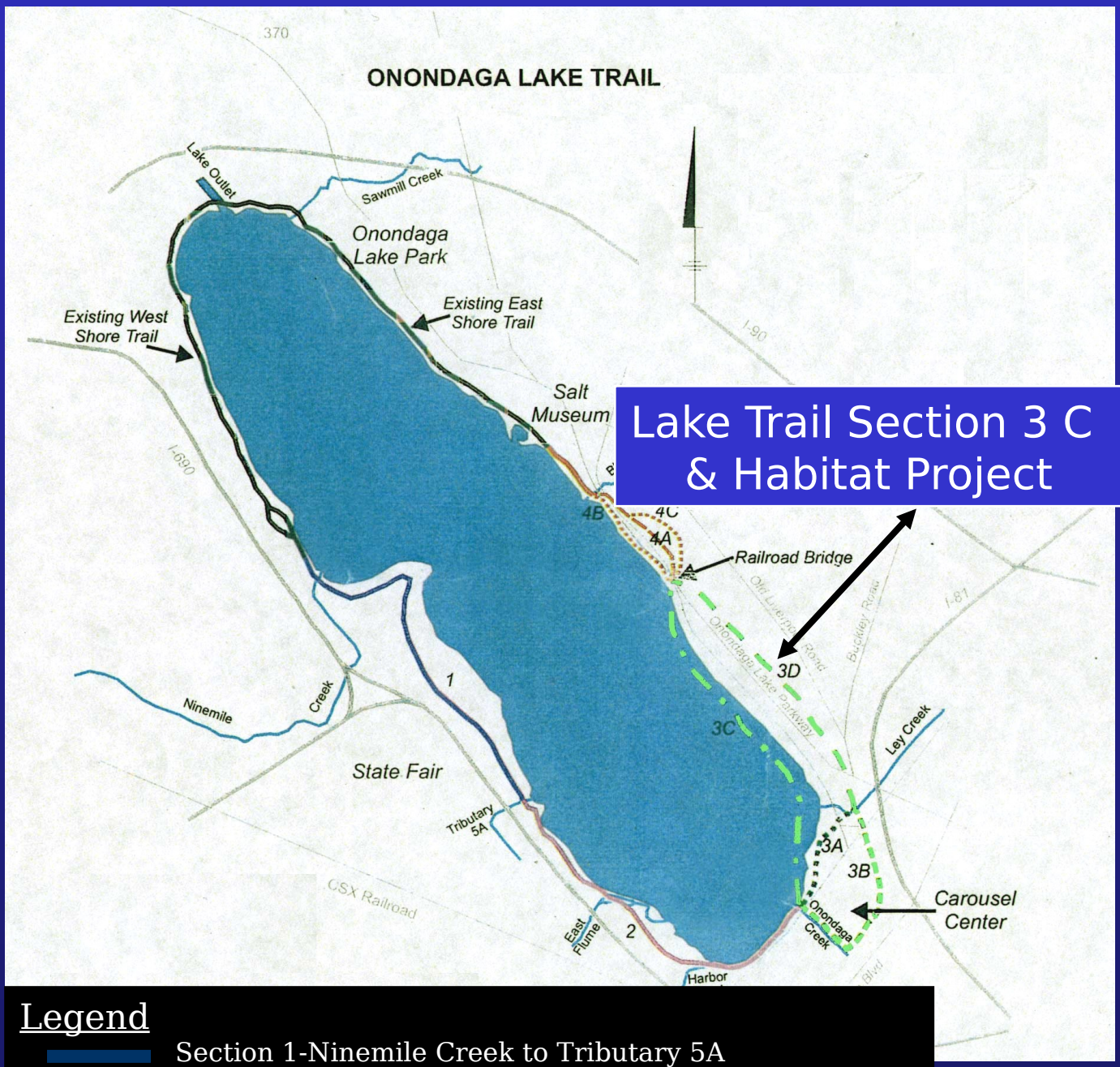
Tab-4
Hydrogeologic

- Groundwater Issues
  - Natural chloride (salt) loading to Onondaga Lake
  - Drilling and modeling underway
- Surface Water Issues
  - Modeling to begin November 2002
  - Establish Baseline for Non-Point Source Pollution Loading
  - Component of Total Maximum Daily Loading (TMDL) development for Onondaga Lake
- Technical Lead
  - United States Geologic Survey

Onondaga Lake Trail

Tab-5 Habitat & Fisheries



Legend

- Section 1-Ninemile Creek to Tributary 5A
- Section 2-Tributary 5A to Onondaga Creek
- Section 3-Onondaga Creek to the Railroad Bridge over Onondaga Lake Parkway
- Section 4-Railroad Bridge over Onondaga Lake Parkway to the Salt Museum

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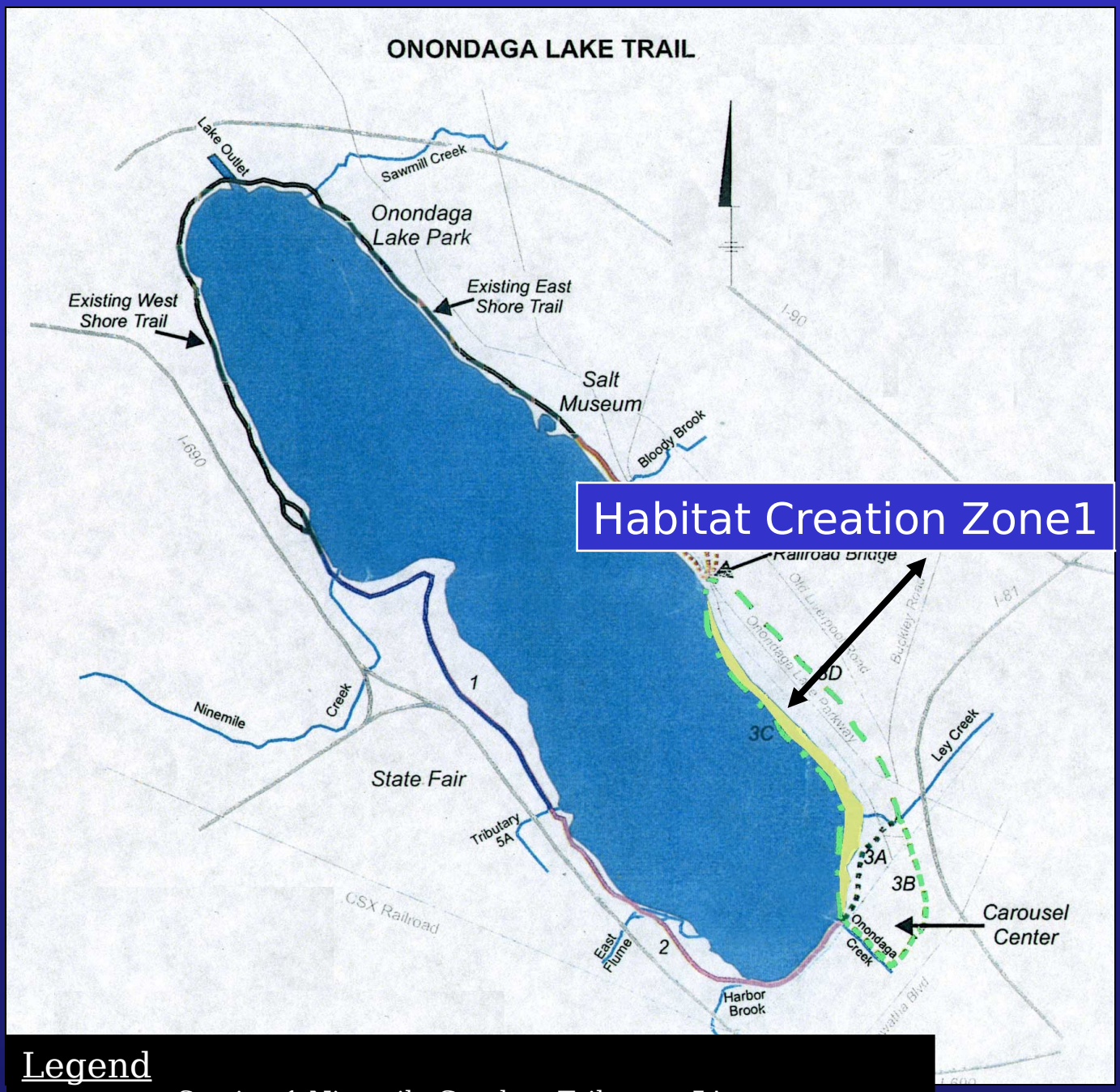
Onondaga Lake Trail



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Tab-6
Inner Harbor & Redevelopment

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Tab-7
Tully Valley Mudboils

Mudboils are cone-shaped, spring-like features that discharge muddy and slightly-salty water which enters Onondaga Creek, contributing to the sediment load carried into Onondaga Lake. Since 1992, various measures have reduced sediment discharge from an average of about 30 tons/day, to about one-half ton/day presently.

Depressurizing well used as part of the remediation of mudboil discharges

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Tab-8
OLP Consultation with the Onondaga Nation

- Section 573 of the Water Resources Development Act of 1999 directs the Secretary of the Army to establish and lead a partnership for the development and implementation of projects for the environmental restoration, conservation, and management of Onondaga Lake. In accordance with Section 573, the Onondaga Lake Partnership (OLP) was formed by the U.S. Army Corps of Engineers (USACE) with the U.S. Environmental Protection Agency (USEPA), the State of New York and its political subdivisions.
- The OLP members, including the USEPA and the USACE, recognize the necessity and importance of consulting with the Onondaga Nation in the restoration, conservation and management of Onondaga Lake watershed resources. The USEPA (Region II) and the USACE (Buffalo District) have assumed the formal responsibility of federal government liaisons to the Onondaga Nation government. This approach is consistent with Executive Order 13175, issued November 9, 2000, compelling consultation and coordination with Indian tribal governments by federal agencies.
- The USEPA and the USACE are committed to consulting with the Onondaga Nation on a government-to-government basis through regular meetings, briefings, and correspondence, including OLP committee meetings. Additionally, the OLP has extended invitations to the Onondaga Nation to participate in OLP outreach activities, such as the First Annual Progress Meeting (October 29, 2001), and Onondaga Lake Day (June 8, 2002).
- The Onondaga Nation has requested the OLP investigate the feasibility of restoring Onondaga Creek as a fishery for Atlantic salmon. The OLP has acknowledged the Nation's request and will address the feasibility through its future planning efforts for fish and wildlife habitat restoration in the watershed.

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Tab-9
State of the Lake Pamphlet

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